Amendments to the Claims

1-30. Canceled.

31. (New) A scalable home-control system and network, comprising:

a platform (100) providing for a grouping of processing devices (110), control processors (120), and ancillary units (130) on plug-in cards;

a plurality of serial data busses (150) disposed in the platform (100) and arranged in parallel as a single, extendable communications backbone for the platform, and such that data traffic can be split across one or more of the serial buses (150), and each serial bus (150) includes a self-timing mechanism to enable bandwidth and data throughput scalability;

a plurality of plug-in slot connectors with each such slot connected in parallel across each and all of the plurality of serial buses, and thereby provide a hot swappable plug-in point for each plug-in card;

a bus controller (210) for using one of said serial buses (150) as a control channel, and providing for device allocations to use said control channel to request and be granted the exclusive use of any other of the other serial buses, wherein a resource allocation for one application can be accommodated without impacting any other allocations;

a bus interface controller (160) provided on said plug-in cards, and providing for the sending and receiving of data over selected ones of said serial buses (150) that have been allocated to it by the bus controller (210);

a plurality of filter processors (115) disposed in said processing devices (110) and arranged in a routing matrix, and connected to a corresponding bus interface controller (160), herein each filter processor (115) performs a particular task on a data item and passes it to a next filter processor (115) in lock-step fashion; and

a user interaction device (360) for locally communicating commands and status with a user, and interfaced with at least one of the processing devices (110);

wherein, such is configured to support legacy devices in existing home control networks.

32. The system and network of Claim 31, further comprising:

an ancillary unit (130) including electro-optic couplers providing for platform extensions to other groupings of processing devices (110), control processors (120), and ancillary units (130) on plug-in cards in other platforms (100).

33. The system and network of Claim 31, further comprising:

a control processor (120) providing for an interface to legacy devices (301-304) to the rest of the system.

34. The system and network of Claim 33, further comprising:

a real-time microkernel (510) included in the control processor (120), and providing for operating system functions that include semaphores, messaging, scheduling, exception and task and memory management, and providing for interfaces to task processors and standard operating systems;

35. The system and network of Claim 34, further comprising:

a coprocessor interface layer (520) that provides the interface between the micromere (510) and any filter programs (530) disposed in said processing devices (110), wherein any task applications (540, 550) have direct access to said filter programs (530) via interface layer (520).